uniden®

UHF CB TRANSCEIVER SUNDOWNER

SUNDOWNER HAND-HELD UH-055

◄ RELEASE
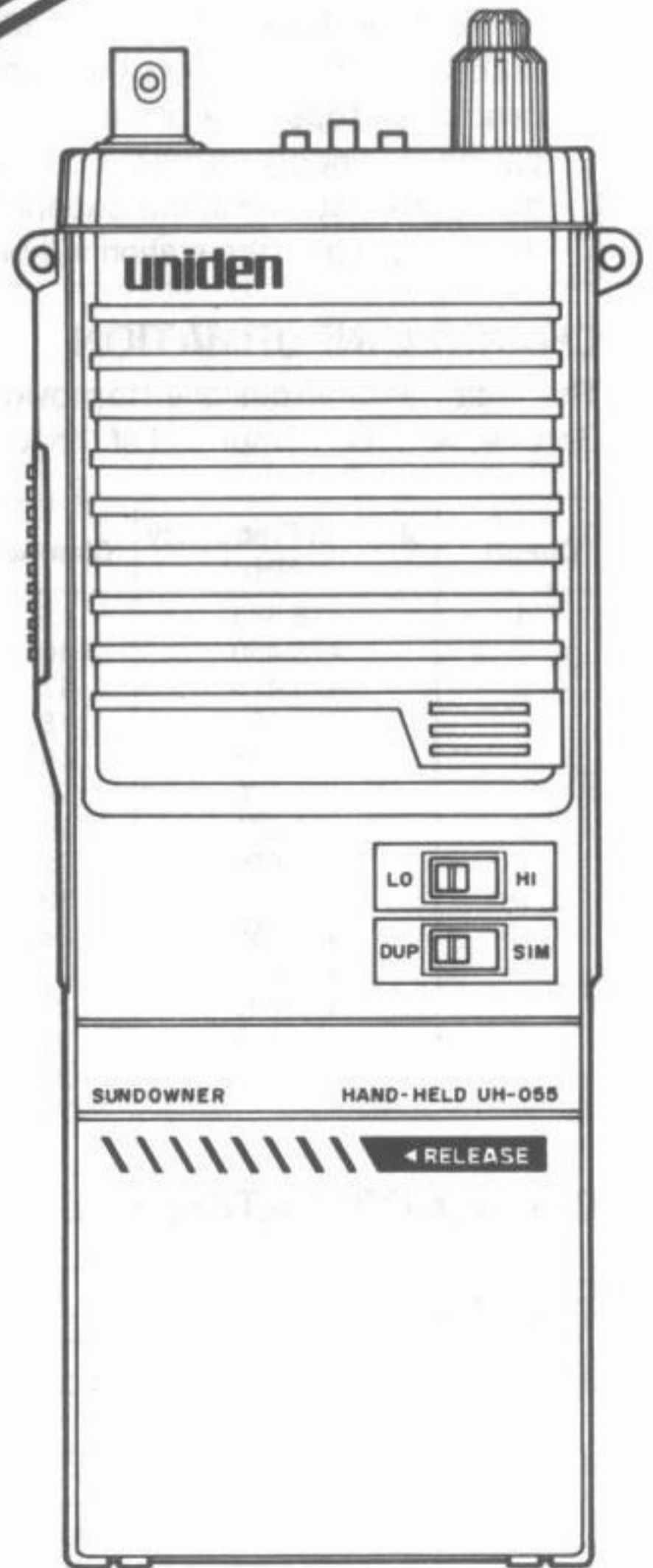
UH-055
HAND-HELD

DESCRIPTION

Your UNIDEN Model SUNDOWNER UH-055 represents the most advanced Hand-Held type radio ever designed for use in the Citizens Band Radio Service. It will operate on any of the 40 frequencies designated as citizens band channels by the Department of Communications. Your Model SUNDOWNER UH-055 features a frequency synthesizing circuit with PHASE LOCK LOOP techniques to assure ultraprecise Frequency control. This radio has been Type Accepted and Type Certified by the D.O.C.

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─────────────────────────── WARNING ───────────────────────────

 Before transmitting with your transceiver, you must obtain a Department of Com-
 munications (D.O.C.) Citizens Radio Licence. Obtain an application form  from the
 D.O.C. Before completing the form you should read the conditions governing the li-
 cencing and operation of the C.R.S. (D.O.C. brochure MS 250). This brochure also
 can be obtained from the D.O.C. After completing the application form, mail it with
 the appropriate fee to the Superintendant Regulatory of Licensing in the State or
 territory in which the station will be operated.
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CHANNEL INFORMATION

This radio has been designed to provide high level performance in the Citizens Band Radio Service, which is comprised of the following frequency assignments:

Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz	Channel	Channel Frequency in MHz
1	476.425	15	476.775	29	477.125
2	476.450	16	476.800	30	477.150
3	476.475	17	476.825	31	477.175
4	476.500	18	476.850	32	477.200
5	476.525	19	476.875	33	477.225
6	476.550	20	476.900	34	477.250
7	476.575	21	476.925	35	477.275
8	476.600	22	476.950	36	477.300
9	476.625	23	476.975	37	477.325
10	476.650	24	477.000	38	477.350
11	476.675	25	477.025	39	477.375
12	476.700	26	477.050	40	477.400
13	476.725	27	477.075		
14	476.750	28	477.100		

DUPLEX OPERATING FREQUENCIES

CHANNEL	RX	TX	CHANNEL	RX	TX
CH1	476.425 MHz	477.175 MHz	CH5	476.525 MHz	477.275 MHz
CH2	476.450 "	477.200 "	CH6	476.550 "	477.300 "
CH3	476.475 "	477.225 "	CH7	476.575 "	477.325 "
CH4	476.500 "	477.250 "	CH8	476.600 "	477.350 "

ANTENNA

Since the maximum allowable power output of the transmitter is limited by the D.O.C., the antenna is a very important factor affecting transmission distance. It is for this reason that we strongly recommended that you install only a quality antenna in your new citizens band system. You have just purchased a superior transceiver. Don't diminish its performance by installing an inferior antenna.
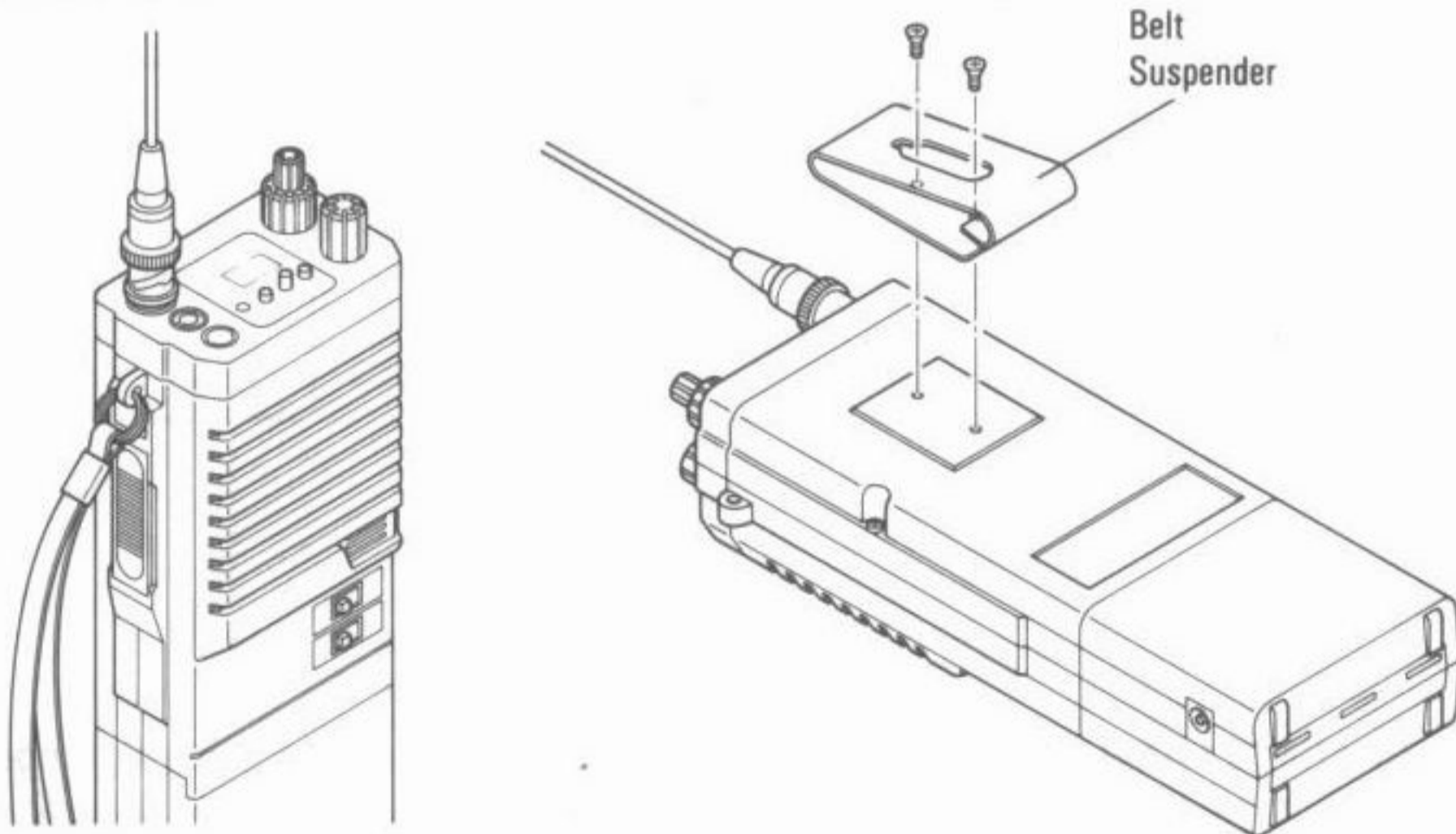
Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element. Your Uniden dealer is qualified to assist you in the selection of the proper antenna to meet your application requirements.

ATTACHMENT OF HANDSTRAP

A mounting hole is provided above the PTT switch on the left of the unit. If you wish to use the handstrap, apply the tip of the metal ring of the strap to this hole and attach by rotating it. See the illustration below.

ATTACHMENT OF BELT SUSPENDER

If you wish to use a belt suspender, attach it with the 2 screws provided on the rear panel as illustrated below.
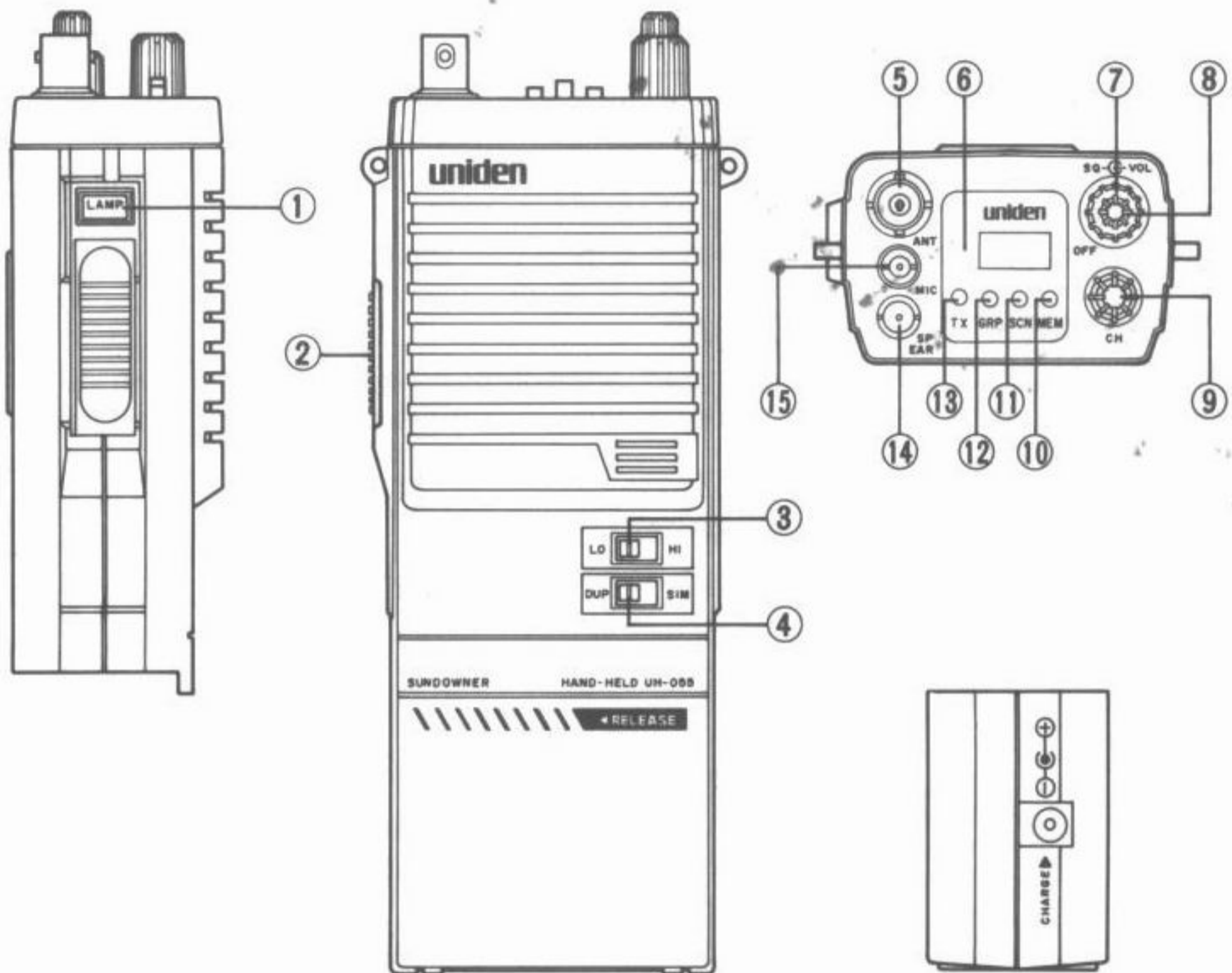

SELCALL

SELCALL (Selective Calling) is a special Squelch System which quiets your receiver until it receives an Encoded signal from another set which matches the one installed in your set. This means your set will remain quiet and not receive idle chit chat or other signals until the station you want to hear calls.

SELCALL is not initially installed in your set (each one has to be individually programmed) but may be purchased as an option.

CONTROLS AND THEIR FUNCTIONS

1. **CHANNEL LAMP SWITCH:** If desired to know proper channel No. in the night operation, turn on this switch, the channel light will light and be able to read it out clearly.

2. **PRESS-TO-TALK SWITCH:** This will changeover the mode to either transmit or receive. Depress it to fall in the transmit mode, and release to return to the receive mode.

3. **POWER HI-LOW SWITCH:** This selects the RF output power. In High mode, the output power is 2.5W (rated output) and LOW 350mW.

   In LOW mode, power consumption is decreased to enable a long hours of operation. For a short distance communication, it is suggested to operate on low power.

4. **DUPLEX/SIMPLEX SWITCH:** Allows the transceiver to operate via a repeater station when switched to channels 1, 2, 3, 4, 5, 6, 7 or 8. The set receives on these channels but automatically transmits on channel 31, 32, 33, 34, 35, 36, 37 or 38 respectively. When this switch is on the "simplex" position the set receives and transmits normally on the same channel (simplex transmission).

5 **ANTENNA CONNECTOR:** Connect the flexible antenna provided with the UH-055. Fit the connector tip of the antenna to the connector on the top panel then press and rotate it clockwise till it stops with a click sound. An external antenna can be used in the same manner as the flexible antenna.

6. **CHANNEL INDICATOR: LCD** indicates the channel number in use.

   During **NORMAL** Mode: Displays the channel selected by the **CHANNEL SELECTOR** Switch.

   During **SCAN** Mode: Displays the channel currently being scanned.

7. **SQUELCH CONTROL:** This Squelch Control is rotated to cut off or eliminate received background noise in the absence of an incoming signal. For maximum receive sensitivity, it is desired that the control be rotated only to this point where the receive background noise or ambient background noise is eliminated. Turn the control fully counterclockwise, then slowly rotate clockwise until the receive noise disappears. Any signal to be heard must now be slightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at the maximum clockwise setting.

8. **OFF/VOL. CONTROL:** Turn clockwise to apply power to the radio and to set the audio volume to the desired listening level. Fully counterclockwise to turn the radio OFF.

9. **CHANNEL SELECTOR SWITCH:** This switch selects the desired channel for transmission and reception. All channels, except channel 11 may be used for Call Channel. Channel 11 has been reserved by the D.O.C. for emergency communications involving the immediate safety of individuals or immediate protection of property. Channel 11 also may be used to render assistance to a motorist. This is the D.O.C. rule and applies to all operators of citizens band radios.

10. **MEM SWITCH:**

   In the **NORMAL** mode: Press the **MEM** switch to program or disable channels in the selected scan memory.

   In the **GROUP SCAN** mode: When scanning, press the **MEM** switch to **HOLD** the channel currently being scanned. Press again to resume scanning.

   In the **OPEN SCAN** mode: When scanning, press the **MEM** switch to **SKIP** over a busy channel you do not wish to listen to.

11. **SCAN SWITCH:** When this switch is pressed, the UH-055 will scan any channels programmed in the selected Scan mode.

In the **GROUP NORMAL** mode or the **OPEN NORMAL** mode, you can select 2 different scan speed (**FAST** or **SLOW**). When this switch is pressed for more than 1 second, (a **BEEP** is hear twice) the radio scans **FAST**.

When it is pressed for less than 1 second, (a **BEEP** is heard once) the radio scans **SLOW**.

NOTE: The radio will not Scan if the selected Scan memory has not been programmed.

12. **GROUP SWITCH:** This switch is used to select the required Scan mode. When this switch is pressed and the **G** is disappeared, the radio is able to scan in the **OPEN SCAN** mode.

Press this switch again to scan in the **GROUP SCAN** mode.

The **G** should be indicated on the **CHANNEL** indicator.

13. **TX INDICATOR:** Light Emitting Diode (LED) indicates red while transmitting. If the LED does not indicate red when the PTT switch is depressed, this phenomenon indicates battery is exhausted. In this case it is recommended to recharge or replace the battery.

14. **SP/EAR JACK:** When you attempt to use an external speaker or an earphone, connect it to this jack.

When this jack is plugged, the built-in speaker will not work but the external speaker or the earphone will.

15. **EXTERNAL MICROPHONE JACK:** When you wish to use an external microphone, connect it to this jack.

Memory Backup
Channels maintained in the UH-055 memory are protected from loss by a built-in capacitor which protects the memory for up to 12 hours when you disconnect the Battery Pack.

BATTERY SAVE
In the **RX** mode, UH-055 saves the battery life. (Except in the **SCAN FAST** mode and the **NORMAL** mode with the optional selcall module.)

OPERATING INSTRUCTIONS

NORMAL OPERATION
RECEIVE OPERATING PROCEDURE

1. Connect the antenna.

2. Before initial use, charge the battery pack for approximately 14 hours.

3. Rotate the **SQUELCH** control fully counterclockwise.

4. Switch the radio on by turning the **OFF/VOLUME** control clockwise and adjust for a comfortable volume level, and adjust for a comfortable squelch level.

5. Select the **NORMAL** mode by pressing the **SCAN** switch. The **S** is disappeared.

6. Rotate the **CHANNEL SELECTOR** switch to select the required channel.

OPERATING PROCEDURE TO TRANSMIT

CAUTION
The transceiver Voltage Standing Wave Ratio (V.S.W.R.) measurement must be performed prior to the use of the transmitter. A V.S.W.R. ratio in excess of 2:1 may damage the transmitter.

TRANSMITTING

To transmit, depress the **PRESS-TO-TALK** switch. Hold the microphone 5-10 cm from your mouth and slightly to one side so that your voice does not project directly into the microphone (this provides best results). Speak at a normal level. Never raise your voice or shout into the microphone. Whenever the **PTT** switch is pressed, the **TX** indicator will light.

PROGRAMMING SCAN CHANNELS

When the radio is initially powered up, there will not be any channels programmed into the **GROUP SCAN MEMORY**.

To program scan channels into the **GROUP SCAN MEMORY**, use the following procedure:

1. Select the **NORMAL** mode by pressing the **SCAN** switch. The **S** is disappeared.

2. Select the **GROUP SCAN** Mode by pressing the **GROUP** switch. The **G** should be indicated on the **CHANNEL** indicator.

3. Rotate the **CHANNEL SELECTOR** switch until the channel you wish to scan is displayed. Note that the **ME** should **NOT** be indicated on the **CHANNEL** indicator, indicating that this channel is not currently programmed into the **GROUP SCAN MEMORY**.

4. Press and hold the **MEM** switch for about 1 second until a **BEEP** is heard. The **ME** should now be indicated on the **CHANNEL** indicator indicating that the channel is now programmed into the memory.

5. Continue steps 3 and 4 to program all the channels you wish to scan.

REMOVING GROUP SCAN CHANNELS

To **DELETE** a programmed channel from the **GROUP SCAN MEMORY**.

1. Rotate the **CHANNEL SELECTOR** switch until the channel you wish to remove is displayed. Note that the **ME** should be indicated on the **CHANNEL** indicator, indicating that this channel is currently programmed in the memory.
2. Press and hold the **MEM** switch for about 2 seconds until a **BEEP** is heard twice. The **ME** should now be extinguished.

OPEN SCANNING

To commence open scanning, select the **OPEN SCAN** mode by pressing the **GROUP** switch. The **G** is disappeared. Then press the **SCAN** switch.

The UH-055 will commence scanning the programmed channels, and will indicate each channel on the **CHANNEL** indicator as it is scanned.

When a busy channel is found, the radio will 'lock' onto it, and will remain there for as long as the signal is present, and for 3 seconds after the transmission ceases. This allows the UH-055 to hold the channel during short breaks in the conversation. Once the channel has remained clear for 3 seconds, the radio will resume scanning.

If you don't wish to listen to a busy channel, you can **SKIP** over it by pressing the **MEM** switch. The receiver will immediately resume scanning.

When you stop scanning, press the **SCAN** switch again.

NOTE: 1. During **OPEN SCAN** mode, the **CHANNEL SELECTOR** switch and **PTT** switch is ignored.

2. The scan rate in **SCAN FAST** mode is 70 msec per channel, i.e. all 40 channels can be scanned in 2.8 seconds.

GROUP SCANNING

NOTE:

1. If the **GROUP SCAN MEMORY** has not been programmed when the **GROUP SCAN** Mode is selected by pressing the **GROUP** switch and the **SCAN** switch is pressed, the UH-055 will ignore the **SCAN** switch and a **BEEP** is heard. It will behave as if it had not been pressed.

2. The **PRIORITY** channel number can easily be read when required by:

   (a) Stop scanning by pressing the **SCAN** switch.
   (b) Pressing the **PTT** switch. The radio will jump to the **PRIORITY** channel for 3 seconds before resuming the **SCAN** function.

   To commence **GROUP SCANNING**, select the **GROUP SCAN** Mode by pressing the **GROUP** switch and select the **SCAN** mode by pressing the **SCAN** switch.

   The UH-055 will now scan the programmed channels, displaying each channel number and the **PRIORITY** channel number. Because, before it scans each channel, it quickly "checks" the **PRIORITY** channel (set by the **CHANNEL SELECTOR** switch).

RECEIVING A SIGNAL ON A GROUP SCAN CHANNEL

If a signal is received on a programmed scan channel, the radio will 'lock' onto that channel **provided there is no signal on the PRIORITY channel**.

When the receiver is 'locked' onto the scan channel, and at the same time, the channel display will flash from the scan channel to the **PRIORITY** channel. This is because the receiver is still 'listening' for signals on the **PRIORITY** channel.

When the scan channel becomes quiet again, the radio will continue to hold the channel for a further 3 seconds in order to allow for a natural pause in the conversation before resuming the Group Scanning mode.

If there is a transmission on the **PRIORITY** channel while you are listening to a scan channel, the receiver will immediately transfer to the **PRIORITY** channel and the **PRIORITY** channel number will be displayed.

To manually **HOLD** a scan channel indefinitely, momentarily press the **MEM** switch. The radio will cease scanning and will hold the channel, but will **continue to DUAL WATCH the PRIORITY channel**. The **S** go on and off on the **CHANNEL** indicator.

To **RESUME** scanning, momentarily press the **MEM** switch again. The receiver will resume scanning.

To transmit on a Group Scan channel, rotate the channel switch to the required channel, making it the **PRIORITY** channel. Return the channel selector to the correct **PRIORITY** channel when you have completed your conversation.

REMOVING OPEN SCAN CHANNELS

When the radio is initially powered up from the box, all 40 channels will be programmed into the **OPEN SCAN MEMORY**.

If you do not wish to scan any particular channels (e.g. if one or more channels are continually busy and always causing the scanning function to pause), you may remove these channels from the scan group using the following sequence.

1. Select the **NORMAL** mode by pressing the **SCAN** switch.

   The **S** should not be indicated on the **CHANNEL** indicator.

2. Select the **OPEN SCAN** mode by pressing the **GROUP** switch. The **G** should **NOT** be indicated on the **CHANNEL** indicator.

3. Rotate the **CHANNEL SELECTOR** switch until the channel you wish to **REMOVE** is displayed on the **CHANNEL** indicator.

   Note that **ME** is indicated on the **CHANNEL** indicator, showing you that this channel is currently included in the scan group.

4. **PRESS** and **HOLD** the **MEM** switch for about 2 seconds until a **BEEP** is heard twice.

NOTE: that the **ME** is now extinguished.

The selected channel has now been removed from the scan group and will not be included when scanning has commenced and the **ME** will not be indicated on that channel.

Continue steps 3 and 4 to remove any other channels you do not wish to scan.

REINSTALLING CHANNELS INTO THE SCAN GROUP

To reinstall previously deleted channels into the scan group, simply repeat steps 3 and 4. However, this time note that there will be a **BEEP** heard when the **MEM** switch is pressed, and the **ME** will be indicated on the **CHANNEL** indicator, showing the selected channel is now included in the scan group.

When you have finished, rotate the channel switch and notice that the **ME** is indicating on the **CHANNEL** indicator which channels are programmed and which have been removed.

SERVICING YOUR TRANSCEIVER

The technical information, diagrams and charts will be supplied upon request.
It is the user's responsibility to see that this radio is operating at all times in accordance with the D.O.C. Citizens Radio Service regulations.
We highly recommend that you consult a qualified radiotelephone technician for the servicing and alignment of this UHF CB radio product.
Please refer to the WARNING information contained in the 1st page of this Owner's Manual.
(**NOTE:** When ordering parts, it is essential to specify the correct model number and serial number of the unit.)

PREVENTIVE MAINTENANCE

At six to twelve month intervals, the following system checks should be made:

1. Check Standing Wave Ratio (SWR).

OPERATOR TROUBLESHOOTING

Should the unit malfunction or not perform properly, the operator should perform the procedures indicated below:

1. If the transceiver is completely inoperative.
   * Check the battery.

2. If trouble is experienced with receiving.
   * Check **OFF/VOLUME** control setting.
   * Be sure **SQUELCH** is adjusted properly. Is the radio over-squelched?
   * Check to see that the radio is switched to an operational mode.

3. If trouble is experienced with transmitting.
   * Check to see that the antenna is securely connected to the **ANTENNA CONNEC-TOR**.

SPECIFICATIONS

GENERAL

Channels	: 40
Frequency Range	: 476.425 MHz to 477.400 MHz
	* REPEATER USE (CH-1 to CH-8, TX only): 477.175 MHz to 477.350 MHz
Crystal Oscillator	: 2
Microphone	: Press to talk switch
Speaker	: 16 ohm, 0.2W
Jacks & Connectors	: Mic 2.5ϕ SP/EAR & DC Power 3.5ϕ
Antenna	: BNC
Channel	: Channel Selector,
Controls	: Power Switch & Volume, Squelch, Channel Lamp, Power Hi-Lo, Duplex/Simplex, Mem, Scan, Group Switch
Indicators	: Channel Indicator (LCD) TX Indicator (LED)
Cabinet Size	: W: 65 mm H: 175 mm (with Battery pack) D: 42 mm
Weight	: 0.3 kg (without Battery pack)
Accessories	: Flexible Antenna, NI-CAD Battery Pack, AC Charger, Earphone, Handstrap, Belt Clip,

MEASUREMENT CONDITIONS

Power Source	: 10V
Antenna Impedance	: 50 ohm
Test Temperature	: 25°C
Modulation Frequency	: 1 kHz (RX/TX)
Mean Signal Input Level	: 1000 μV
Reference Audio Output Power	: 125mW
Reference Modulation Deviation	: ±3 kHz Deviation
Audio Output Load	: 8 ohms resistive

TRANSMITTER SECTION

Frequency Tolerance at 25°C (5 minutes after switch on)	: ±0.5 kHz
Carrier Power	
(High)	: 2.5W
(Low)	: 0.35W
Spurious Emission	
476.3625MHz to 477.4625MHz	: 200μW
476.3125MHz to 476.3625MHz	: 2.5μW
477.4625MHz to 477.5125MHz	: 2.5μW
Other Frequency	: 1.0μW
Current Drain	
(High)	: 1.35A
(Low)	: 650mA
Modulation Frequency Response: (1 kHz, 0dB reference, at 600 Hz deviation)	
Lower at 500 Hz	: −6 dB
Upper at 2.5 kHz	: +8 dB
Microphone Sensitivity for 3 kHz Deviation	: 5mV
Maximum Deviation	
at 1 kHz	: ±4.75 kHz
at 6 kHz	: ±1.5 kHz MAX

RECEIVER SECTION

Sensitivity for 12 dB SINAD	: 0.3μV
Overall Audio Fidelity (1 kHz, 0 dB reference)	
Lower at 500 Hz	: +3 dB
Upper at 2.5 kHz	: −8 dB
Adjacent Channel Selectivity (±25 kHz)	: 60 dB
Maximum Audio Output Power	: 0.35W
Audio Output Power at 10% THD	: 0.3W
Hum & Noise Ratio at Input 1mV	: 40 dB
Squelch Sensitivity at Threshold	: 0.2μV
Squelch Sensitivity at Tight	: 1μV
Image Rejection Ratio	: 50 dB
IF Rejection Ratio	: 70 dB
Oscillator Dropout Voltage	: 7V
Current Drain at squelched	: 55mA
Current Drain at Maximum Output	: 150mA

WARRANTY

WARRANTOR: UNIDEN Australia Pty. Ltd. ("UNIDEN").

ELEMENTS OF WARRANTY: UNIDEN warrants to the original retail owner for the duration of this warranty, UNIDEN CB Product (hereinafter referred to as the Product) to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WARRANTY DURATION: This warranty to the original user shall terminate and be of no further effect One (1) Year after the date of original retail sale. The warranty is invalid if the Product is (A) damaged or not maintained as reasonable or necessary, (B) modified, altered, or used as part of any conversion kits, subassemblies, or any configurations not sold by UNIDEN, (C) improperly installed, (D) repaired by someone other than an authorized service center for a defect or malfunction covered by this warranty, (E) used in any conjunction with equipment or parts or as part of any system not manufactured by UNIDEN (F) installed, programmed or serviced by anyone other than an authorized UNIDEN service center.

STATEMENT OF REMEDY: In the event that the product does not conform to this warranty at any time while this warranty is in effect, warrantor will repair the defect and return it to you without charge for parts, service, or any other cost incurred by warrantor or its representatives in connection with the performance of this warranty. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: In the event that the Product does not conform to this warranty, the Product should be shipped or delivered, freight prepaid, to warrantor at 345 Princes Highway, Rockdale, N.S.W. 2216 with evidence of original purchase.

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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